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L10: Entry 2 of 6

File: USPT

Nov 9, 1999

DOCUMENT-IDENTIFIER: US 5982891 A

TITLE: Systems and methods for secure transaction management and electronic rights protection

US Patent No. (1):
5982891Brief Summary Text (142):

VDE allows the needs of electronic commerce participants to be served and it can bind such participants together in a universe wide, trusted commercial network that can be secure enough to support very large amounts of commerce. VDE's security and metering secure subsystem core will be present at all physical locations where VDE related content is (a) assigned usage related control information (rules and mediating data), and/or (b) used. This core can perform security and auditing functions (including metering) that operate within a "virtual black box," a collection of distributed, very secure VDE related hardware instances that are interconnected by secured information exchange (for example, telecommunication) processes and distributed database means. VDE further includes highly configurable transaction operating system technology, one or more associated libraries of load modules along with affiliated data, VDE related administration, data preparation, and analysis applications, as well as system software designed to enable VDE integration into host environments and applications. VDE's usage control information, for example, provide for property content and/or appliance related: usage authorization, usage auditing (which may include audit reduction), usage billing, usage payment, privacy filtering, reporting, and security related communication and encryption techniques.

Detailed Description Text (1759):

Delivery of audit reports through a path of handling may be in part insured by an inverse (return of information) audit method. Many VDE methods have at least two pieces: a portion that manages the process of producing audit information at a user's VDE node; and a portion that subsequently acts on audit data. In an example of the handling of audit information bound for a plurality of auditors, a single container object is received at a clearinghouse (or other auditor). This container may contain (a) certain encrypted audit information that is for the use of the clearinghouse itself, and (b) certain other encrypted audit information bound for other one or more auditor parties. The two sets of information may have the same, overlapping and in part different, or entirely different, information content. Alternatively, the clearinghouse VDE node may be able to work with some or all of the provided audit information. The audit information may be, in part, or whole, in some summary and/or analyzed form further processed at the clearinghouse and/or may be combined with other information to form a, at least in part, derived set of information and inserted into one or more at least in part secure VDE objects to be communicated to said one or more (further) auditor parties. When an audit information container is securely processed at said clearinghouse VDE node by said inverse (return) audit method, the clearinghouse VDE node can create one or more VDE administrative objects for securely carrying audit information to other auditors while separately processing the secure audit information that is specified for use by said clearinghouse. Secure audit processes and credit information distribution between VDE participants normally takes place within the secure VDE "black box," that is processes are securely processed within secure VDE PPE650 and audit information is securely communicated between the VDE secure subsystems of VDE participants employing VDE secure communication techniques (e.g., public key encryption, and authentication).



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L10: Entry 1 of 6

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Jun 26, 2001

US-PAT-NO: 6253193

DOCUMENT-IDENTIFIER: US 6253193 B1

** See image for Certificate of Correction **

TITLE: Systems and methods for the secure transaction management and electronic rights protection

DATE-ISSUED: June 26, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Ginter; Karl L.	Beltsville	MD		
Shear; Victor H.	Bethesda	MD		
Spahn; Francis J.	El Cerrito	CA		
Van Wie; David M.	Sunnyvale	CA		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE	CODE
InterTrust Technologies Corporation	Santa Clara	CA				02

APPL-NO: 09/ 208017 [PALM]

DATE FILED: December 9, 1998

PARENT-CASE:

This is a continuation of application Ser. No. 08/964,333, filed Nov. 4, 1997 now U.S. Pat. No. 5,982,891, which is a continuation of application Ser. No. 08/388,107, filed Feb. 13, 1995, now abandoned--all of which are incorporated herein by reference.

INT-CL: [07] H04 L 9/32

US-CL-ISSUED: 705/57; 705/52

US-CL-CURRENT: 705/57; 705/52

FIELD-OF-SEARCH: 705/51, 705/52, 705/56, 705/57, 380/201-203, 386/94, 386/124

PRIOR-ART-DISCLOSED:

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☐ Search Selected☐ Search ALL

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ART-UNIT: 277

PRIMARY-EXAMINER: Barron, Jr.; Gilberto

ATTY-AGENT-FIRM: Finnegan, Henderson, Farabow, Garrett & Dunner L.L.P.

ABSTRACT:

The present invention provides systems and methods for secure transaction management and electronic rights protection. Electronic appliances such as computers equipped in accordance with the present invention help to ensure that information is accessed and used only in authorized ways, and maintain the integrity, availability, and/or confidentiality of the information. Such electronic appliances provide a distributed virtual distribution environment (VDE) that may enforce a secure chain of handling and control, for example, to control and/or meter or otherwise monitor use of electronically stored or disseminated information. Such a virtual distribution environment may be used to protect rights of various participants in electronic commerce and other electronic or electronic-facilitated transactions. Distributed and other operating systems, environments and architectures, such as, for example, those using tamper-resistant hardware-based processors, may establish security at each node. These techniques may be used to support an all-electronic information distribution, for example, utilizing the "electronic highway."

72 Claims, 155 Drawing figures



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L10: Entry 1 of 6

File: USPT

Jun 26, 2001

DOCUMENT-IDENTIFIER: US 6253193 B1

**** See image for Certificate of Correction ****

TITLE: Systems and methods for the secure transaction management and electronic rights protection

US Patent No. (1):
6253193Brief Summary Text (142):

VDE allows the needs of electronic commerce participants to be served and it can bind such participants together in a universe wide, trusted commercial network that can be secure enough to support very large amounts of commerce. VDE's security and metering secure subsystem core will be present at all physical locations where VDE related content is (a) assigned usage related control information (rules and mediating data), and/or (b) used. This core can perform security and auditing functions (including metering) that operate within a "virtual black box," a collection of distributed, very secure VDE related hardware instances that are interconnected by secured information exchange (for example, telecommunication) processes and distributed database means. VDE further includes highly configurable transaction operating system technology, one or more associated libraries of load modules along with affiliated data, VDE related administration, data preparation, and analysis applications, as well as system software designed to enable VDE integration into host environments and applications. VDE's usage control information, for example, provide for property content and/or appliance related: usage authorization, usage auditing (which may include audit reduction), usage billing, usage payment, privacy filtering, reporting, and security related communication and encryption techniques.

Detailed Description Text (1764):

Delivery of audit reports through a path of handling may be in part insured by an inverse (return of information) audit method. Many VDE methods have at least two pieces: a portion that manages the process of producing audit information at a user's VDE node; and a portion that subsequently acts on audit data. In an example of the handling of audit information bound for a plurality of auditors, a single container object is received at a clearinghouse (or other auditor). This container may contain (a) certain encrypted audit information that is for the use of the clearinghouse itself, and (b) certain other encrypted audit information bound for other one or more auditor parties. The two sets of information may have the same, overlapping and in part different, or entirely different, information content. Alternatively, the clearinghouse VDE node may be able to work with some or all of the provided audit information. The audit information may be, in part, or whole, in some summary and/or analyzed form further processed at the clearinghouse and/or may be combined with other information to form a, at least in part, derived set of information and inserted into one or more at least in part secure VDE objects to be communicated to said one or more (further) auditor parties. When an audit information container is securely processed at said clearinghouse VDE node by said inverse (return) audit method, the clearinghouse VDE node can create one or more VDE administrative objects for securely carrying audit information to other auditors while separately processing the secure audit information that is specified for use by said clearinghouse. Secure audit processes and credit information distribution between VDE participants normally takes place within the secure VDE "black box," that is processes are securely processed within secure VDE PPE650 and audit information is securely communicated between the VDE secure subsystems of VDE participants employing VDE secure communication techniques (e.g., public key encryption, and authentication).